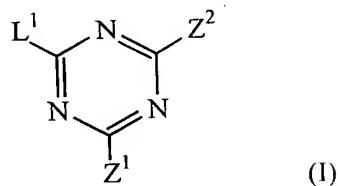


WHAT IS CLAIMED IS:

1. Triazine-comprising capping agents of the formula (I) :



wherein L¹ is an aryloxy group comprising at least one electron withdrawing group ortho, meta, or para to the linkage between the aryloxy group and the triazine ring, and Z¹ and Z² are each independently groups which are essentially inert to reaction with a nucleophilic group on a polymer or monomer, or which react with a nucleophilic group on a polymer or monomer at a slower rate than the group, L¹.

2. The capping agents of claim 1 wherein Z¹ and Z² are each independently alkyl, aryl, alkaryl, aralkyl, alkoxy, alkylamino, arylamino or aryloxy.

3. The capping agents of claim 1 wherein L¹ is an aryloxy group comprising at least one electron withdrawing group ortho or para to the linkage between the aryloxy group and the triazine ring, selected from the group consisting of carboalkoxy, carboaryloxy, carboaryl, halo, cyano, and nitro, and mixtures thereof.

4. The capping agents of claim 1 wherein L¹ is selected from the group consisting of o-carbomethoxyphenoxy, o-carbomethoxymethylphenoxy, o-carboethoxyphenoxy, o-carbopropoxyphenoxy, o-chlorophenoxy, o-carbophenylphenoxy, o-carbophenoxyphenoxy, o-carbobenzoxyphenoxy, and o-nitrophenoxy.

5. The capping agents of claim 2 wherein Z¹ and Z² are each independently selected from the group consisting of methyl, phenyl, methoxy, ethoxy, isopropoxy, n-butoxy, iso-butoxy, t-butoxy, benzyloxy, cyclohexyloxy, methylcyclohexyloxy, nonyloxy, decyloxy, octadecyloxy, oleyloxy, phenoxy, substituted aryloxy, arylaryloxy, arylphenoxy, alkylphenoxy, 2-alkylphenoxy, 3-alkylphenoxy, 4-alkylphenoxy, n-butylphenoxy, isobutylphenoxy, t-butylphenoxy, 4-

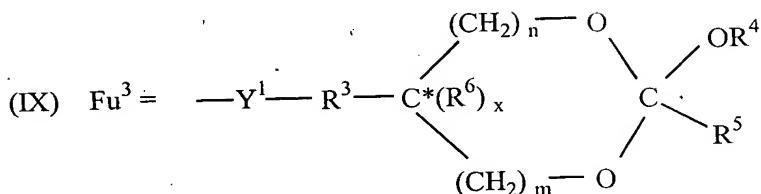
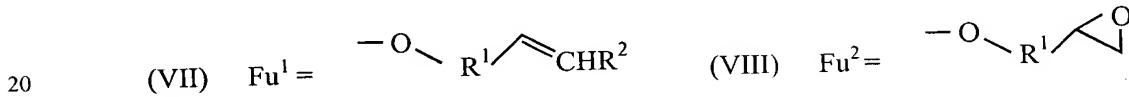
t-butylphenoxy, n-pentylphenoxy, 4-t-amylphenoxy, n-hexylphenoxy,
 cyclohexylphenoxy, phenylphenoxy, naphthylphenoxy, 4-cumylphenoxy, 4-(1,1,3,3-
 tetramethylbutyl)phenoxy, octylphenoxy, 4-tert-octylphenoxy, nonylphenoxy,
 5 dodecylphenoxy, octadecylphenoxy, pentadecylphenoxy, pentadecenylphenoxy,
 methoxyphenoxy, phenoxyphenoxy, benzyloxyphenoxy, n-hexyloxyphenoxy, 2-
 methoxyethylphenoxy, 4-(4'-oxyphenyl)-2,2,4-trimethylchroman, 2-(4'-oxyphenyl)-
 10 2,4,4-trimethylchroman, 1-(1-methyl-1-phenylethyl)-4-(1-methyl-1-(4'-
 oxyphenyl)ethyl)-benzene, 1,3-bis(1-methyl-1-phenylethyl)-5-(1-methyl-1-(4'-
 oxyphenyl)ethyl)-benzene, 4-cyanophenoxy, dialkylphenoxy, 2,6-dialkylphenoxy,
 15 2,6-dimethylphenoxy, 2,6-di-t-butylphenoxy, 2,4-dialkylphenoxy, 2,4-di-t-
 butylphenoxy, 2,5-dialkylphenoxy, 2,5-di-t-butylphenoxy, 2,5-dicumylphenoxy, 3,5-
 dialkylphenoxy, 3,5-di-t-butylphenoxy, 3,5-dicumylphenoxy, 2,3-dialkylphenoxy,
 2,3-di-t-butylphenoxy, dimethoxyphenoxy, halophenoxy, 4-halophenoxy, 4-
 bromophenoxy, dihalophenoxy, dibromophenoxy, 2,6-dihalophenoxy, 2,6-
 20 dibromophenoxy, 2,6-dichlorophenoxy, 2,6-(dialkoxy carbonyl)phenoxy, 2,6-
 (dimethoxycarbonyl)phenoxy, trialkylphenoxy, 2,3,6-trialkylphenoxy, 2,3,6-
 trimethylphenoxy, 2,4,6-trialkylphenoxy, 2,4,6-trimethylphenoxy, trihalophenoxy,
 tribromophenoxy, 2,4,6-trihalophenoxy, 2,4,6-tribromophenoxy, and 2,4,6-
 trichlorophenoxy.

20 6. The capping agents of claim 1 wherein Z¹ and Z² are the same.

7. The capping agents of claim 1 wherein L¹ is o-carbomethoxyphenoxy,
 and Z¹ and Z² are the same and are each selected from the group consisting of alkyl,
 aryl, alkaryl, aralkyl, alkoxy, alkylamino, arylamino, aryloxy, methyl, phenyl,
 methoxy, ethoxy, isopropoxy, n-butoxy, iso-butoxy, t-butoxy, benzyloxy,
 25 cyclohexyloxy, methylcyclohexyloxy, nonyloxy, decyloxy, octadecyloxy, oleyloxy,
 phenoxy, substituted aryloxy, arylaryloxy, arylphenoxy, alkylphenoxy, 2-
 alkylphenoxy, 3-alkylphenoxy, 4-alkylphenoxy, n-butylphenoxy, isobutylphenoxy, t-
 butylphenoxy, 4-t-butylphenoxy, n-pentylphenoxy, 4-t-amylphenoxy, n-
 hexylphenoxy, cyclohexylphenoxy, phenylphenoxy, naphthylphenoxy, 4-
 30 cumylphenoxy, 4-(1,1,3,3-tetramethylbutyl)phenoxy, octylphenoxy, 4-tert-
 octylphenoxy, nonylphenoxy, dodecylphenoxy, octadecylphenoxy,

pentadecylphenoxy, pentadecenylphenoxy, methoxyphenoxy, phenoxyphenoxy,
 benzyloxyphenoxy, n-hexyloxyphenoxy, 2-methoxyethylphenoxy, 4-(4'-oxyphenyl)-
 2,2,4-trimethylchroman, 2-(4'-oxyphenyl)-2,4,4-trimethylchroman, 1-(1-methyl-1-
 phenylethyl)-4-(1-methyl-1-(4'-oxyphenyl)ethyl)-benzene, 1,3-bis(1-methyl-1-
 phenylethyl)-5-(1-methyl-1-(4'-oxyphenyl)ethyl)-benzene, 4-cyanophenoxy,
 5 dialkylphenoxy, 2,6-dialkylphenoxy, 2,6-dimethylphenoxy, 2,6-di-t-butylphenoxy,
 2,4-dialkylphenoxy, 2,4-di-t-butylphenoxy, 2,5-dialkylphenoxy, 2,5-di-t-
 butylphenoxy, 2,5-dicumylphenoxy, 3,5-dialkylphenoxy, 3,5-di-t-butylphenoxy, 3,5-
 dicumylphenoxy, 2,3-dialkylphenoxy, 2,3-di-t-butylphenoxy, dimethoxyphenoxy,
 10 halophenoxy, 4-halophenoxy, 4-bromophenoxy, dihalophenoxy, dibromophenoxy,
 2,6-dihalophenoxy, 2,6-dibromophenoxy, 2,6-dichlorophenoxy, 2,6-
 (dialkoxy carbonyl)phenoxy, 2,6-(dimethoxycarbonyl)phenoxy, trialkylphenoxy,
 2,3,6-trialkylphenoxy, 2,3,6-trimethylphenoxy, 2,4,6-trialkylphenoxy, 2,4,6-
 trimethylphenoxy, trihalophenoxy, tribromophenoxy, 2,4,6-trihalophenoxy, 2,4,6-
 tribromophenoxy, and 2,4,6-trichlorophenoxy.
 15

8. The capping agents of claim 1 wherein either Z^1 , or Z^2 , or both Z^1 and
 Z^2 are selected from the group consisting of vinyl, allyl, propargyloxy, olefinic groups
 of formula (VII; Fu^1), epoxy groups of formula (VIII; Fu^2), and cyclic orthoester
 groups of formula (IX; Fu^3):
 20



wherein R^1 is alkyl or aryl; R^2 is hydrogen, alkyl, or aryl; Y^1 is nitrogen or
 oxygen; R^3 is a C_{1-6} alkylene radical, and R^4 is a C_{1-4} primary or secondary alkyl
 25 radical or is an alkylene radical forming a second 5- or 6-membered ring with C^* , R^5

is a C₁₋₄ primary or secondary alkyl or C₆₋₁₀ aromatic radical, or R⁴ and R⁵ together with the atoms connecting them form a 5-, 6-, or 7-membered ring; R⁶ is hydrogen or a C₁₋₄ primary or secondary alkyl; m is zero or one, and n is from 1 to 2m; and x is zero when R⁴ and C* form a ring and is otherwise one.

5 9. The capping agents of claim 8 wherein L¹ is an aryloxy group comprising at least one electron withdrawing group ortho or para to the linkage between the aryloxy group and the triazine ring, selected from the group consisting of carboalkoxy, carboaryloxy, carboaryl, halo, cyano, and nitro, and mixtures thereof.

10 10. The capping agents of claim 8 wherein L¹ is selected from the group consisting of o-carbomethoxyphenoxy, o-carbomethoxymethylphenoxy, o-carboethoxyphenoxy, o-carbopropoxyphenoxy, o-chlorophenoxy, o-carbophenylphenoxy, o-carbophenoxyphenoxy, o-carbobenzoxyphenoxy, and o-nitrophenoxy.

15 11. The capping agents of claim 8 wherein Z¹ and Z² are the same.

12. The capping agents of claim 8 wherein Z¹ is alkyl, aryl, alkaryl, aralkyl, alkoxy, alkylamino, arylamino or aryloxy.

13. The capping agents of claim 12 wherein Z¹ is selected from the group consisting of methyl, phenyl, methoxy, ethoxy, isopropoxy, n-butoxy, iso-butoxy, t-butoxy, benzyloxy, cyclohexyloxy, methylcyclohexyloxy, nonyloxy, decyloxy, octadecyloxy, oleyloxy, phenoxy, substituted aryloxy, arylaryloxy, arylphenoxy, alkylphenoxy, 2-alkylphenoxy, 3-alkylphenoxy, 4-alkylphenoxy, n-butylphenoxy, isobutylphenoxy, t-butylphenoxy, 4-t-butylphenoxy, n-pentylphenoxy, 4-t-amylphenoxy, n-hexylphenoxy, cyclohexylphenoxy, phenylphenoxy, naphthylphenoxy, 4-cumylphenoxy, 4-(1,1,3,3-tetramethylbutyl)phenoxy, octylphenoxy, 4-tert-octylphenoxy, nonylphenoxy, dodecylphenoxy, octadecylphenoxy, pentadecylphenoxy, pentadecenylphenoxy, methoxyphenoxy, phenoxyphenoxy, benzyloxyphenoxy, n-hexyloxyphenoxy, 2-methoxyethylphenoxy, 4-(4'-oxyphenyl)-2,2,4-trimethylchroman, 2-(4'-oxyphenyl)-2,4,4-trimethylchroman, 1-(1-methyl-1-phenylethyl)-4-(1-methyl-1-(4'-oxyphenyl)ethyl)-benzene, 1,3-bis(1-

14. The capping agents of claim 8 wherein L¹ is o-carbomethoxyphenoxy; Z¹ is selected from the group consisting of alkyl, aryl, alkaryl, aralkyl, alkoxy, alkylamino, arylamino, aryloxy, methyl, phenyl, methoxy, ethoxy, isopropoxy, n-alkyloxy, iso-butoxy, t-butoxy, benzyloxy, cyclohexyloxy, methylcyclohexyloxy, nonyloxy, decyloxy, octadecyloxy, oleyloxy, phenoxy, substituted aryloxy, arylaryloxy, arylphenoxy, alkylphenoxy, 2-alkylphenoxy, 3-alkylphenoxy, 4-alkylphenoxy, n-butylphenoxy, isobutylphenoxy, t-butylphenoxy, 4-t-butylphenoxy, n-pentylphenoxy, 4-t-amylphenoxy, n-hexylphenoxy, cyclohexylphenoxy, phenylphenoxy, naphthylphenoxy, 4-cumylphenoxy, 4-(1,1,3,3-tetramethylbutyl)phenoxy, octylphenoxy, 4-tert-octylphenoxy, nonylphenoxy, dodecylphenoxy, octadecylphenoxy, pentadecylphenoxy, pentadecenylphenoxy, methoxyphenoxy, phenoxyphenoxy, benzyloxyphenoxy, n-hexyloxyphenoxy, 2-methoxyethylphenoxy, 4-(4'-oxyphenyl)-2,2,4-trimethylchroman, 2-(4'-oxyphenyl)-2,4,4-trimethylchroman, 1-(1-methyl-1-phenylethyl)-4-(1-methyl-1-(4'-oxyphenyl)ethyl)-benzene, 1,3-bis(1-methyl-1-phenylethyl)-5-(1-methyl-1-(4'-oxyphenyl)ethyl)-benzene, 4-cyanophenoxy, dialkylphenoxy, 2,6-dialkylphenoxy, 2,6-dimethylphenoxy, 2,6-di-t-butylphenoxy, 2,4-dialkylphenoxy, 2,4-di-t-butylphenoxy, 2,5-dialkylphenoxy, 2,5-di-t-butylphenoxy, 2,5-dicumylphenoxy, 3,5-dialkylphenoxy, 3,5-di-t-butylphenoxy, 3,5-dicumylphenoxy, 2,3-dialkylphenoxy, 2,3-di-t-butylphenoxy, dimethoxyphenoxy, halophenoxy, 4-halophenoxy, 4-

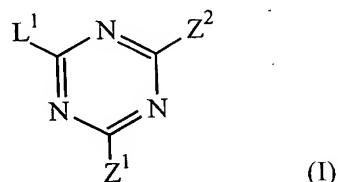
bromophenoxy, dihalophenoxy, dibromophenoxy, 2,6-dihalophenoxy, 2,6-dibromophenoxy, 2,6-dichlorophenoxy, 2,6-(dialkoxycarbonyl)phenoxy, 2,6-(dimethoxycarbonyl)phenoxy, trialkylphenoxy, 2,3,6-trialkylphenoxy, 2,3,6-trimethylphenoxy, 2,4,6-trialkylphenoxy, 2,4,6-trimethylphenoxy, trihalophenoxy, 5 tribromophenoxy, 2,4,6-trihalophenoxy, 2,4,6-tribromophenoxy, and 2,4,6-trichlorophenoxy; and Z² is selected from the group consisting of vinyl, allyl, allyloxy, 2-allylphenoxy, 4-allylphenoxy, 4-ethenylphenoxy, cinnamylloxy, 4-allyl-2-methoxyphenoxy, propargyloxy, glycidoxy, and 4-oxymethyl-2-methoxy-2-methyl-1,3-dioxolane.

10 15. The capping agents of claim 14 wherein Z² is selected from the group consisting of glycidoxy and 4-oxymethyl-2-methoxy-2-methyl-1,3-dioxolane.

15 16. The capping agents of claim 8 wherein L¹ is o-carbomethoxyphenoxy; and Z¹ and Z² are the same and are selected from the group consisting of vinyl, allyl, allyloxy, 2-allylphenoxy, 4-allylphenoxy, 4-ethenylphenoxy, cinnamylloxy, 4-allyl-2-methoxyphenoxy, propargyloxy, glycidoxy, and 4-oxymethyl-2-methoxy-2-methyl-1,3-dioxolane.

17. The capping agents of claim 16 wherein Z¹ and Z² are the same and are selected from the group consisting of glycidoxy and 4-oxymethyl-2-methoxy-2-methyl-1,3-dioxolane.

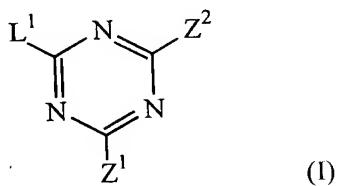
20 18. Triazine-comprising capping agents of the formula (I) :



wherein L¹ is chloro; Z¹ is selected from the group consisting of alkyl, aryl, alkaryl, aralkyl, alkoxy, alkylamino, arylamino, aryloxy, methyl, phenyl, methoxy, ethoxy, isopropoxy, n-butoxy, iso-butoxy, t-butoxy, benzyloxy, cyclohexyloxy, 25 methylcyclohexyloxy, nonyloxy, decyloxy, octadecyloxy, oleyloxy, phenoxy,

substituted aryloxy, arylaryloxy, arylphenoxy, alkylphenoxy, 2-alkylphenoxy, 3-alkylphenoxy, 4-alkylphenoxy, n-butylphenoxy, isobutylphenoxy, t-butylphenoxy, 4-t-butylphenoxy, n-pentylphenoxy, 4-t-amylphenoxy, n-hexylphenoxy, cyclohexylphenoxy, phenylphenoxy, naphthylphenoxy, 4-cumylphenoxy, 4-(1,1,3,3-tetramethylbutyl)phenoxy, octylphenoxy, 4-tert-octylphenoxy, nonylphenoxy, dodecylphenoxy, octadecylphenoxy, pentadecylphenoxy, pentadecenylphenoxy, methoxyphenoxy, phenoxyphenoxy, benzyloxyphenoxy, n-hexyloxyphenoxy, 2-methoxyethylphenoxy, 4-(4'-oxyphenyl)-2,2,4-trimethylchroman, 2-(4'-oxyphenyl)-2,4,4-trimethylchroman, 1-(1-methyl-1-phenylethyl)-4-(1-methyl-1-(4'-oxyphenyl)ethyl)-benzene, 1,3-bis(1-methyl-1-phenylethyl)-5-(1-methyl-1-(4'-oxyphenyl)ethyl)-benzene, 4-cyanophenoxy, dialkylphenoxy, 2,6-dialkylphenoxy, 2,6-dimethylphenoxy, 2,6-di-t-butylphenoxy, 2,4-dialkylphenoxy, 2,4-di-t-butylphenoxy, 2,5-dialkylphenoxy, 2,5-di-t-butylphenoxy, 2,5-dicumylphenoxy, 3,5-dialkylphenoxy, 3,5-di-t-butylphenoxy, 3,5-dicumylphenoxy, 2,3-dialkylphenoxy, 2,3-di-t-butylphenoxy, dimethoxyphenoxy, halophenoxy, 4-halophenoxy, 4-bromophenoxy, dihalophenoxy, dibromophenoxy, 2,6-dihalophenoxy, 2,6-dibromophenoxy, 2,6-dichlorophenoxy, 2,6-(dialkoxy carbonyl)phenoxy, 2,6-(dimethoxycarbonyl)phenoxy, trialkylphenoxy, 2,3,6-trialkylphenoxy, 2,3,6-trimethylphenoxy, 2,4,6-trimethylphenoxy, trihalophenoxy, tribromophenoxy, 2,4,6-trihalophenoxy, 2,4,6-tribromophenoxy, and 2,4,6-trichlorophenoxy; and Z² is selected from the group consisting of vinyl, allyl, allyloxy, 2-allylphenoxy, 4-allylphenoxy, 4-ethenylphenoxy, cinnamylloxy, 4-allyl-2-methoxyphenoxy, and propargyloxy.

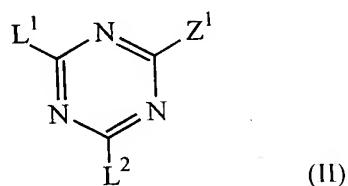
19. Triazine-comprising capping agents of the formula (I) :



wherein L¹ is chloro; and Z¹ and Z² are the same and are selected from the group consisting of vinyl, allyl, allyloxy, 2-allylphenoxy, 4-allylphenoxy, 4-ethenylphenoxy, cinnamylloxy, 4-allyl-2-methoxyphenoxy, and propargyloxy.

5

20. Triazine-comprising capping agents of the formula (II) :



10

wherein L¹ and L² are each independently an aryloxy group comprising at least one electron withdrawing group ortho, meta, or para to the linkage between the aryloxy group and the triazine ring, and Z¹ is a group which is essentially inert to reaction with a nucleophilic group on a polymer or monomer, or which reacts with a nucleophilic group on a polymer or monomer at a slower rate than either of the groups, L¹ and L².

15

21. The capping agents of claim 20 wherein Z¹ is alkyl, aryl, alkaryl, aralkyl, alkoxy, alkylamino, arylamino or aryloxy.

20

22. The capping agents of claim 20 wherein L¹ and L² are each independently an aryloxy group comprising at least one electron withdrawing group ortho or para to the linkage between the aryloxy group and the triazine ring, selected from the group consisting of carboalkoxy, carboaryloxy, carboaryl, halo, cyano, and nitro, and mixtures thereof.

23. The capping agents of claim 20 wherein L¹ and L² are each independently selected from the group consisting of o-carbomethoxyphenoxy, o-carbomethoxymethylphenoxy, o-carboethoxyphenoxy, o-carbopropoxyphenoxy, o-chlorophenoxy, o-carbophenylphenoxy, o-carbophenoxyphenoxy, carbobenzoxyphenoxy, and o-nitrophenoxy.

5 24. The capping agents of claim 23 wherein L¹ and L² are the same.

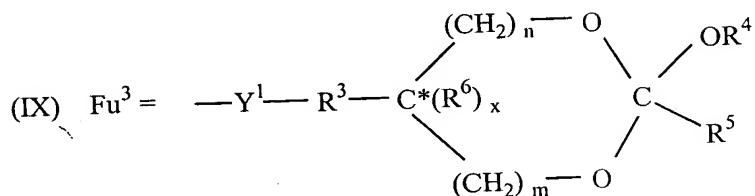
25. The capping agents of claim 21 wherein Z¹ is selected from the group consisting of methyl, phenyl, methoxy, ethoxy, isopropoxy, n-butoxy, iso-butoxy, t-butoxy, benzyloxy, cyclohexyloxy, methylcyclohexyloxy, nonyloxy, decyloxy, octadecyloxy, oleyloxy, phenoxy, substituted aryloxy, arylaryloxy, arylphenoxy, alkylphenoxy, 2-alkylphenoxy, 3-alkylphenoxy, 4-alkylphenoxy, n-butylphenoxy, isobutylphenoxy, t-butylphenoxy, 4-t-butylphenoxy, n-pentylphenoxy, 4-t-amylphenoxy, n-hexylphenoxy, cyclohexylphenoxy, phenylphenoxy, naphthylphenoxy, 4-cumylphenoxy, 4-(1,1,3,3-tetramethylbutyl)phenoxy, octylphenoxy, 4-tert-octylphenoxy, nonylphenoxy, dodecylphenoxy, octadecylphenoxy, pentadecylphenoxy, pentadecenylphenoxy, methoxyphenoxy, phenoxyphenoxy, benzyloxyphenoxy, n-hexyloxyphenoxy, 2-methoxyethylphenoxy, 4-(4'-oxyphenyl)-2,2,4-trimethylchroman, 2-(4'-oxyphenyl)-2,4,4-trimethylchroman, 1,3-bis(1-(1-methyl-1-phenylethyl)-4-(1-methyl-1-(4'-oxyphenyl)ethyl)-benzene, 4-methyl-1-phenylethyl)-5-(1-methyl-1-(4'-oxyphenyl)ethyl)-benzene, 4-cyanophenoxy, dialkylphenoxy, 2,6-dialkylphenoxy, 2,6-dimethylphenoxy, 2,6-di-t-butylphenoxy, 2,4-dialkylphenoxy, 2,4-di-t-butylphenoxy, 2,5-dialkylphenoxy, 2,5-di-t-butylphenoxy, 2,5-dicumylphenoxy, 3,5-dialkylphenoxy, 3,5-di-t-butylphenoxy, 3,5-dicumylphenoxy, 2,3-dialkylphenoxy, 2,3-di-t-butylphenoxy, dimethoxyphenoxy, halophenoxy, 4-halophenoxy, 4-bromophenoxy, dihalophenoxy, dibromophenoxy, 2,6-dihalophenoxy, 2,6-dibromophenoxy, 2,6-dichlorophenoxy, 2,6-(dialkoxy carbonyl)phenoxy, 2,6-(dimethoxycarbonyl)phenoxy, trialkylphenoxy, 2,3,6-trialkylphenoxy, 2,3,6-trimethylphenoxy, 2,4,6-trialkylphenoxy, 2,4,6-trimethylphenoxy, trihalophenoxy, tribromophenoxy, 2,4,6-trihalophenoxy, 2,4,6-tribromophenoxy, and 2,4,6-trichlorophenoxy.

26. The capping agents of claim 20 wherein L¹ and L² are each o-carbomethoxyphenoxy, and Z¹ is selected from the group consisting of alkyl, aryl, alkaryl, aralkyl, alkoxy, alkylamino, arylamino, aryloxy, methyl, phenyl, methoxy, ethoxy, isopropoxy, n-butoxy, iso-butoxy, t-butoxy, benzyloxy, cyclohexyloxy, methylcyclohexyloxy, nonyloxy, decyloxy, octadecyloxy, oleyloxy, phenoxy, substituted aryloxy, arylaryloxy, arylphenoxy, alkylphenoxy, 2-alkylphenoxy, 3-alkylphenoxy, 4-alkylphenoxy, n-butylphenoxy, isobutylphenoxy, t-butylphenoxy, 4-t-butylphenoxy, n-pentylphenoxy, 4-t-amylphenoxy, n-hexylphenoxy, cyclohexylphenoxy, phenylphenoxy, naphthylphenoxy, 4-cumylphenoxy, 4-(1,1,3,3-tetramethylbutyl)phenoxy, octylphenoxy, 4-tert-octylphenoxy, nonylphenoxy, dodecylphenoxy, octadecylphenoxy, pentadecylphenoxy, pentadecenylphenoxy, methoxyphenoxy, phenoxyphenoxy, benzyloxyphenoxy, n-hexyloxyphenoxy, 2-methoxyethylphenoxy, 4-(4'-oxyphenyl)-2,2,4-trimethylchroman, 2-(4'-oxyphenyl)-2,4,4-trimethylchroman, 1-(1-methyl-1-phenylethyl)-4-(1-methyl-1-(4'-oxyphenyl)ethyl)-benzene, 1,3-bis(1-methyl-1-phenylethyl)-5-(1-methyl-1-(4'-oxyphenyl)ethyl)-benzene, 4-cyanophenoxy, dialkylphenoxy, 2,6-dialkylphenoxy, 2,6-dimethylphenoxy, 2,6-di-t-butylphenoxy, 2,4-dialkylphenoxy, 2,4-di-t-butylphenoxy, 2,5-dialkylphenoxy, 2,5-di-t-butylphenoxy, 2,5-dicumylphenoxy, 3,5-dialkylphenoxy, 3,5-di-t-butylphenoxy, 3,5-dicumylphenoxy, 2,3-dialkylphenoxy, 2,3-di-t-butylphenoxy, dimethoxyphenoxy, halophenoxy, 4-halophenoxy, 4-bromophenoxy, dihalophenoxy, dibromophenoxy, 2,6-dihalophenoxy, 2,6-dibromophenoxy, 2,6-dichlorophenoxy, 2,6-(dialkoxy carbonyl)phenoxy, 2,6-(dimethoxycarbonyl)phenoxy, trialkylphenoxy, 2,3,6-trialkylphenoxy, 2,3,6-trimethylphenoxy, 2,4,6-trialkylphenoxy, 2,4,6-trimethylphenoxy, trihalophenoxy, 2,4,6-tribromophenoxy, 2,4,6-trihalophenoxy, 2,4,6-tribromophenoxy, and 2,4,6-trichlorophenoxy.

27. The capping agents of claim 20 wherein Z^1 is selected from the group consisting of vinyl, allyl, propargyloxy, olefinic groups of formula (VII; Fu^1), epoxy groups of formula (VIII; Fu^2), and cyclic orthoester groups of formula (IX; Fu^3):



5



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wherein R^1 is alkyl or aryl; R^2 is hydrogen, alkyl, or aryl; Y^1 is nitrogen or oxygen; R^3 is a C_{1-6} alkylene radical, and R^4 is a C_{1-4} primary or secondary alkyl radical or is an alkylene radical forming a second 5- or 6-membered ring with C^* ; R^5 is a C_{1-4} primary or secondary alkyl or C_{6-10} aromatic radical, or R^4 and R^5 together with the atoms connecting them form a 5-, 6-, or 7-membered ring; R^6 is hydrogen or a C_{1-4} primary or secondary alkyl; m is zero or one, and n is from 1 to $2m$; and x is zero when R^4 and C^* form a ring and is otherwise one.

15

28. The capping agents of claim 27 wherein L^1 and L^2 are each

independently an aryloxy group comprising at least one electron withdrawing group ortho or para to the linkage between the aryloxy group and the triazine ring, selected from the group consisting of carboalkoxy, carboaryloxy, carboaryl, halo, cyano, and nitro, and mixtures thereof.

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29. The capping agents of claim 27 wherein L^1 and L^2 are each

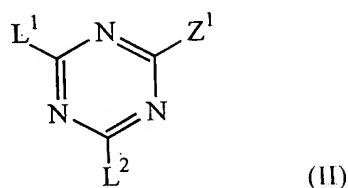
independently selected from the group consisting of o-carbomethoxyphenoxy, o-carbomethoxymethylphenoxy, o-carboethoxyphenoxy, o-carbopropoxyphenoxy, o-chlorophenoxy, o-carbophenylphenoxy, o-carbophenoxyphenoxy, carbobenzoxophenoxy, and o-nitrophenoxy.

30. The capping agents of claim 29 wherein L^1 and L^2 are the same.

31. The capping agents of claim 27 wherein L¹ and L² are each o-carbomethoxyphenoxy; and Z¹ is selected from the group consisting of vinyl, allyl, allyloxy, 2-allylphenoxy, 4-allylphenoxy, 4-ethenylphenoxy, cinnamyloxy, 4-allyl-2-methoxyphenoxy, propargyloxy, glycidoxy, and 4-oxymethyl-2-methoxy-2-methyl-1,3-dioxolane.

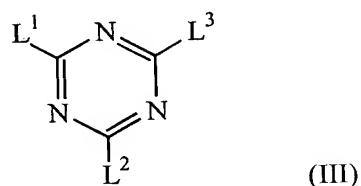
5 32. The capping agents of claim 31 wherein Z¹ is selected from the group consisting of glycidoxy and 4-oxymethyl-2-methoxy-2-methyl-1,3-dioxolane.

33. Triazine-comprising capping agents of the formula (II) :



10 wherein L¹ and L² are each chloro; and Z¹ is selected from the group consisting of vinyl, allyl, allyloxy, 2-allylphenoxy, 4-allylphenoxy, 4-ethenylphenoxy, cinnamyloxy, 4-allyl-2-methoxyphenoxy, and propargyloxy.

34. Triazine-comprising capping agents of the formula (III) :



15 wherein L¹, L², and L³ are each independently an aryloxy group comprising at least one electron withdrawing group ortho, meta, or para to the linkage between the aryloxy group and the triazine ring.

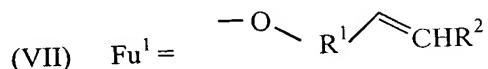
35. The capping agents of claim 34 wherein L¹, L², and L³ are each independently an aryloxy group comprising at least one electron withdrawing group ortho or para to the linkage between the aryloxy group and the triazine ring, selected from the group consisting of carboalkoxy, carboaryloxy, carboaryl, halo, cyano, and nitro, and mixtures thereof.

36. The capping agents of claim 34 wherein L¹, L², and L³ are each independently selected from the group consisting of o-carbomethoxyphenoxy, o-carbomethoxymethylphenoxy, o-carboethoxyphenoxy, o-carbopropoxyphenoxy, o-chlorophenoxy, o-carbophenylphenoxy, o-carbophenoxyphenoxy, o-carbobenzoxyphenoxy, and o-nitrophenoxy.

37. The capping agents of claim 36 wherein L¹, L², and L³ are the same.

38. The capping agent of claim 36 wherein L¹, L², and L³ are each o-carbomethoxyphenoxy.

39. A polymer with nucleophilic groups capped with a triazine moiety comprising at least one vinyl, allyl, or propargyloxy group, or olefinic group of formula (VII; Fu¹):



wherein R¹ is alkyl or aryl; and R² is hydrogen, alkyl, or aryl.

40. The polymer of claim 39 wherein the triazine moiety comprises at least one vinyl, allyl, allyloxy, 2-allylphenoxy, 4-allylphenoxy, 4-ethenylphenoxy, cinnamylphenoxy, 4-allyl-2-methoxyphenoxy, or propargyloxy group.

41. The polymer of claim 39 in which the nucleophilic groups capped are hydroxy or amino groups.

42. The polymer of claim 41 which is a nucleophile-containing polyether, poly(arylene ether), poly(phenylene ether), polyethersulfone, polyetherester, polyetherimide, polyamideimide, polyimide, polyetherketone, polyetheretherketone, polyetherketoneketone, poly(arylene sulfide), poly(phenylene sulfide), polycarbonate, polyester, poly(alkylene terephthalate), polyarylate, liquid crystalline polyester, polyestercarbonate, polysulfone, polyethylene glycol, polypropylene glycol, polyethylene-propylene glycol, siloxane, copolymer containing hydroxyalkylacrylate, oxidized polyolefins, or phenoxy resin.

5 43. The polymer of claim 42 which is a hydroxy-terminated poly(phenylene ether) or a hydroxy-terminated polycarbonate.

10 44. The polymer of claim 43 which is a poly(phenylene ether) comprising 2,6-dimethylphenylene structural units.

15 45. The polymer of claim 43 which is a polycarbonate comprising bisphenol A structural units.

46. A process for capping nucleophilic groups in a polymer or monomer which comprises combining and reacting the polymer or monomer with a triazine-comprising capping agent of claim 1.

15 47. The process of claim 46 which comprises a catalyst.

20 48. The process of claim 47 wherein the catalyst is at least one member selected from the group consisting of a nitrogen-containing basic compound, a phosphorus-containing basic compound, an alkali metal compound, sodium hydroxide, an alkaline earth metal compound, a boric acid, and a boric ester.

49. The process of claim 46 wherein L¹ is removed from a reaction mixture by devolatilization as leaving group compound and recovered.

25 50. A process for capping nucleophilic groups in a polymer or monomer which comprises combining and reacting the polymer or monomer with a triazine-comprising capping agent of claim 7.

51. A process for capping nucleophilic groups in a polymer or monomer which comprises combining and reacting the polymer or monomer with a triazine-comprising capping agent of claim 8.

52. The process of claim 51 which comprises a catalyst.

53. The process of claim 52 wherein the catalyst is at least one member selected from the group consisting of a nitrogen-containing basic compound, a phosphorus-containing basic compound, an alkali metal compound, sodium hydroxide, an alkaline earth metal compound, a boric acid, and a boric ester.

10 54. The process of claim 51 wherein L¹ is removed from a reaction mixture by devolatilization as leaving group compound and recovered.

55. A process for capping nucleophilic groups in a polymer or monomer which comprises combining and reacting the polymer or monomer with a triazine-comprising capping agent of claim 14.

15 56. A process for capping nucleophilic groups in a polymer or monomer which comprises combining and reacting the polymer or monomer with a triazine-comprising capping agent of claim 16.

57. A process for capping nucleophilic groups in a polymer or monomer which comprises combining and reacting the polymer or monomer with a triazine-comprising capping agent of claim 18.

20 58. A process for capping nucleophilic groups in a polymer or monomer which comprises combining and reacting the polymer or monomer with a triazine-comprising capping agent of claim 19.

25 59. A process for capping nucleophilic groups in a polymer or monomer which comprises combining and reacting the polymer or monomer with a triazine-comprising capping agent of claim 20.

60. The process of claim 59 which comprises a catalyst.

61. The process of claim 60 wherein the catalyst is at least one member selected from the group consisting of a nitrogen-containing basic compound, a phosphorus-containing basic compound, an alkali metal compound, sodium hydroxide, an alkaline earth metal compound, a boric acid, and a boric ester.

5 62. The process of claim 59 wherein L¹ is removed from a reaction mixture by devolatilization as leaving group compound and recovered.

10 63. A process for capping nucleophilic groups in a polymer or monomer which comprises combining and reacting the polymer or monomer with a triazine-comprising capping agent of claim 26.

15 64. A process for capping nucleophilic groups in a polymer or monomer which comprises combining and reacting the polymer or monomer with a triazine-comprising capping agent of claim 27.

65. The process of claim 64 which comprises a catalyst.

15 66. The process of claim 65 wherein the catalyst is at least one member selected from the group consisting of a nitrogen-containing basic compound, a phosphorus-containing basic compound, an alkali metal compound, sodium hydroxide, an alkaline earth metal compound, a boric acid, and a boric ester.

67. The process of claim 64 wherein L¹ is removed from a reaction mixture by devolatilization as leaving group compound and recovered.

20 68. A process for capping nucleophilic groups in a polymer or monomer which comprises combining and reacting the polymer or monomer with a triazine-comprising capping agent of claim 31.

25 69. A process for capping nucleophilic groups in a polymer or monomer which comprises combining and reacting the polymer or monomer with a triazine-comprising capping agent of claim 33.

70. A process for capping nucleophilic groups in a polymer or monomer which comprises combining and reacting the polymer or monomer with a triazine-comprising capping agent of claim 34.

71. The process of claim 70 which comprises a catalyst.

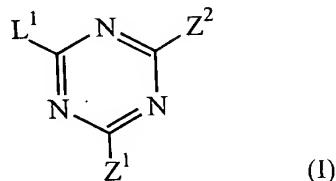
5 72. The process of claim 71 wherein the catalyst is at least one member selected from the group consisting of a nitrogen-containing basic compound, a phosphorus-containing basic compound, an alkali metal compound, sodium hydroxide, an alkaline earth metal compound, a boric acid, and a boric ester.

10 73. The process of claim 70 wherein L¹ is removed from a reaction mixture by devolatilization as leaving group compound and recovered.

74. A process for capping nucleophilic groups in a polymer or monomer which comprises combining and reacting the polymer or monomer with a triazine-comprising capping agent of claim 35.

15 75. A process for capping nucleophilic groups in a polymer or monomer which comprises combining and reacting the polymer or monomer with a triazine-comprising capping agent of claim 38.

76. A process for capping terminal hydroxy groups in a polycarbonate which comprises combining and reacting the polymer with a triazine-comprising capping agent of the formula (I) :



20

wherein L¹ is o-carbomethoxyphenoxy, and Z¹ and Z² are each independently selected from the group consisting of alkyl, aryl, alkaryl, aralkyl, alkoxy, alkylamino, arylamino, aryloxy, methyl, phenyl, methoxy, ethoxy, isopropoxy, n-butoxy, iso-butoxy, t-butoxy, benzyloxy, cyclohexyloxy, methylcyclohexyloxy, nonyloxy,

5 decyloxy, octadecyloxy, oleyloxy, phenoxy, substituted aryloxy, arylaryloxy,
arylphenoxy, alkylphenoxy, 2-alkylphenoxy, 3-alkylphenoxy, 4-alkylphenoxy, n-
butylphenoxy, isobutylphenoxy, t-butylphenoxy, 4-t-butylphenoxy, n-pentylphenoxy,
4-t-amylphenoxy, n-hexylphenoxy, cyclohexylphenoxy, phenylphenoxy,
naphthylphenoxy, 4-cumylphenoxy, 4-(1,1,3,3-tetramethylbutyl)phenoxy,
octylphenoxy, 4-tert-octylphenoxy, nonylphenoxy, dodecylphenoxy,
octadecylphenoxy, pentadecylphenoxy, pentadecenylphenoxy, methoxyphenoxy,
phenoxyphenoxy, benzyloxyphenoxy, n-hexyloxyphenoxy, 2-methoxyethylphenoxy,
4-(4'-oxyphenyl)-2,2,4-trimethylchroman, 2-(4'-oxyphenyl)-2,4,4-trimethylchroman,
10 1-(1-methyl-1-phenylethyl)-4-(1-methyl-1-(4'-oxyphenyl)ethyl)-benzene, 1,3-bis(1-
methyl-1-phenylethyl)-5-(1-methyl-1-(4'-oxyphenyl)ethyl)-benzene, 4-
cyanophenoxy, dialkylphenoxy, 2,6-dialkylphenoxy, 2,6-dimethylphenoxy, 2,6-di-t-
butylphenoxy, 2,4-dialkylphenoxy, 2,4-di-t-butylphenoxy, 2,5-dialkylphenoxy, 2,5-di-
t-butylphenoxy, 2,5-dicumylphenoxy, 3,5-dialkylphenoxy, 3,5-di-t-butylphenoxy, 3,5-
dicumylphenoxy, 2,3-dialkylphenoxy, 2,3-di-t-butylphenoxy, dimethoxyphenoxy,
halophenoxy, 4-halophenoxy, 4-bromophenoxy, dihalophenoxy, dibromophenoxy,
15 2,6-dihalophenoxy, 2,6-dibromophenoxy, 2,6-dichlorophenoxy, 2,6-
(dialkoxy carbonyl)phenoxy, 2,6-(dimethoxycarbonyl)phenoxy, trialkylphenoxy,
2,3,6-trialkylphenoxy, 2,3,6-trimethylphenoxy, 2,4,6-trialkylphenoxy, 2,4,6-
trimethylphenoxy, trihalophenoxy, tribromophenoxy, 2,4,6-trihalophenoxy, 2,4,6-
tribromophenoxy, 2,4,6-trichlorophenoxy, vinyl, allyl, allyloxy, 2-allylphenoxy, 4-
allylphenoxy, 4-ethenylphenoxy, cinnamylloxy, 4-allyl-2-methoxyphenoxy,
20 4-propargyloxy, glycidoxy, and 4-oxymethyl-2-methoxy-2-methyl-1,3-dioxolane.

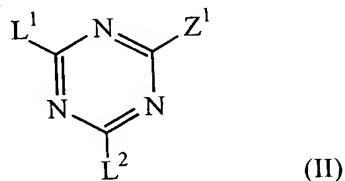
25 77. The process of claim 76 wherein the polycarbonate is derived from a
melt reaction process with reactants comprising bisphenol A and diphenylcarbonate.

78. The process of claim 76 which comprises a catalyst.

30 79. The process of claim 78 wherein the catalyst is at least one member
selected from the group consisting of a nitrogen-containing basic compound, a
phosphorus-containing basic compound, an alkali metal compound, sodium
hydroxide, an alkaline earth metal compound, a boric acid, and a boric ester.

80. The process of claim 76 wherein L¹ is removed from a reaction mixture by devolatilization as methyl salicylate and recovered.

81. A process for capping terminal hydroxy groups in a polycarbonate which comprises combining and reacting the polymer with a triazine-comprising capping agent of the formula (II) :



wherein L¹ and L² are each o-carbomethoxyphenoxy; and Z¹ is selected from the group consisting of alkyl, aryl, alkaryl, aralkyl, alkoxy, alkylamino, arylamino, aryloxy, methyl, phenyl, methoxy, ethoxy, isopropoxy, n-butoxy, iso-butoxy, t-but oxy, benzyloxy, cyclohexyloxy, methylcyclohexyloxy, nonyloxy, decyloxy, octadecyloxy, oleyloxy, phenoxy, substituted aryloxy, arylaryloxy, arylphenoxy, alkylphenoxy, 2-alkylphenoxy, 3-alkylphenoxy, 4-alkylphenoxy, n-butylphenoxy, isobutylphenoxy, t-butylphenoxy, 4-t-butylphenoxy, n-pentylphenoxy, 4-t-amyloxy, n-hexylphenoxy, cyclohexylphenoxy, phenylphenoxy, naphthylphenoxy, 4-cumylphenoxy, 4-(1,1,3,3-tetramethylbutyl)phenoxy, octylphenoxy, 4-tert-octylphenoxy, nonylphenoxy, dodecylphenoxy, octadecylphenoxy, pentadecylphenoxy, pentadecenylphenoxy, methoxyphenoxy, phenoxyphenoxy, benzyloxyphenoxy, n-hexyloxyphenoxy, 2-methoxyethylphenoxy, 4-(4'-oxyphenyl)-2,2,4-trimethylchroman, 2-(4'-oxyphenyl)-2,4,4-trimethylchroman, 1,3-bis(1-1-(1-methyl-1-phenylethyl)-4-(1-methyl-1-(4'-oxyphenyl)ethyl)-benzene, 4-25 4-(1-methyl-1-phenylethyl)-5-(1-methyl-1-(4'-oxyphenyl)ethyl)-benzene, 4-cyanophenoxy, dialkylphenoxy, 2,6-dialkylphenoxy, 2,6-dimethylphenoxy, 2,6-di-t-butylphenoxy, 2,4-dialkylphenoxy, 2,4-di-t-butylphenoxy, 2,5-dialkylphenoxy, 2,5-di-t-butylphenoxy, 2,5-dicumylphenoxy, 3,5-dialkylphenoxy, 3,5-di-t-butylphenoxy, 3,5-dicumylphenoxy, 2,3-dialkylphenoxy, 2,3-di-t-butylphenoxy, dimethoxyphenoxy, halophenoxy, 4-halophenoxy, 4-bromophenoxy, dihalophenoxy, dibromophenoxy, 2,6-dihalophenoxy, 2,6-dibromophenoxy, 2,6-dichlorophenoxy, 2,6-

(dialkoxycarbonyl)phenoxy, 2,6-(dimethoxycarbonyl)phenoxy, trialkylphenoxy, 2,3,6-trialkylphenoxy, 2,3,6-trimethylphenoxy, 2,4,6-trialkylphenoxy, 2,4,6-trimethylphenoxy, trihalophenoxy, tribromophenoxy, 2,4,6-trihalophenoxy, 2,4,6-tribromophenoxy, 2,4,6-trichlorophenoxy, vinyl, allyl, allyloxy, 2-allylphenoxy, 4-allylphenoxy, 4-ethenylphenoxy, cinnamylxy, 4-allyl-2-methoxyphenoxy, propargyloxy, glycidoxy, and 4-oxymethyl-2-methoxy-2-methyl-1,3-dioxolane.

5 82. The process of claim 81 wherein at least a portion of polycarbonate chains are chain extended.

10 83. The process of claim 81 wherein the polycarbonate number average molecular weight increases by at least 1,000 Daltons.

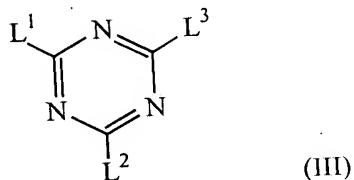
15 84. The process of claim 81 wherein the polycarbonate is derived from a melt reaction process with reactants comprising bisphenol A and diphenylcarbonate.

85. The process of claim 81 which comprises a catalyst.

15 86. The process of claim 85 wherein the catalyst is at least one member selected from the group consisting of a nitrogen-containing basic compound, a phosphorus-containing basic compound, an alkali metal compound, sodium hydroxide, an alkaline earth metal compound, a boric acid, and a boric ester.

87. The process of claim 81 wherein L is removed from a reaction mixture by devolatilization as methyl salicylate and recovered.

88. A process for capping terminal hydroxy groups in a polycarbonate which comprises combining and reacting the polymer with a triazine-comprising capping agent of the formula (III) :



5 wherein L¹, L², and L³ are each o-carbomethoxyphenoxy.

89. The process of claim 88 wherein at least a portion of polycarbonate chains are branched.

90. The process of claim 88 wherein the value for polycarbonate melt volume rate decreases by at least 10% compared to its initial value.

10 91. The process of claim 88 wherein the polycarbonate is derived from a
melt reaction process with reactants comprising bisphenol A and diphenylcarbonate.

92 The process of claim 88 which comprises a catalyst.

15 93. The process of claim 92 wherein the catalyst is at least one member selected from the group consisting of a nitrogen-containing basic compound, a phosphorus-containing basic compound, an alkali metal compound, sodium hydroxide, an alkaline earth metal compound, a boric acid, and a boric ester.

94. The process of claim 88 wherein L is removed from a reaction mixture by devolatilization as methyl salicylate and recovered.

20 95. A process for preparing polycarbonate which comprises melt
transesterification in the presence of at least one triazine-comprising capping agent
comprising at least one o-carbomethoxyphenoxy substituent.

96. The process of claim 95 wherein the polycarbonate comprises structural units derived from the reaction of bisphenol A and diphenylcarbonate.

97. The process of claim 95 which comprises a catalyst.

98. The process of claim 97 wherein the catalyst is at least one member selected from the group consisting of a nitrogen-containing basic compound, a phosphorus-containing basic compound, an alkali metal compound, sodium hydroxide, an alkaline earth metal compound, a boric acid, and a boric ester.

5

99. The process of claim 95 wherein methyl salicylate is removed from a reaction mixture by devolatilization and recovered.